

SEQUENCE LISTING

<110> University of Cincinnati
Kersten, Small
Stephen, Liggett

<120> Methods of Cardiovascular Disease Assessment in an Individual

<130> 10738-50PCT

<150> US 60/409,167

<151> 2002-09-09

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<170> PatentIn version 3.2

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Asn Ala Ser Gly Ala Ser Trp Gly Pro Pro Arg Gly Gln Tyr Ser Ala
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Gly Ala Val Ala Gly Leu Ala Ala Val Val Gly Phe Leu Ile Val Phe
 50 55 60

Thr Val Val Gly Asn Val Leu Val Val Ile Ala Val Leu Thr Ser Arg
 65 70 75 80

Ala Leu Arg Ala Pro Gln Asn Leu Phe Leu Val Ser Leu Ala Ser Ala
 85 90 95

Asp Ile Leu Val Ala Thr Leu Val Met Pro Phe Ser Leu Ala Asn Glu
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Leu Met Ala Tyr Trp Tyr Phe Gly Gln Val Trp Cys Gly Val Tyr Leu
 115 120 125

Ala Leu Asp Val Leu Phe Cys Thr Ser Ser Ile Val His Leu Cys Ala
 130 135 140

Ile Ser Leu Asp Arg Tyr Trp Ser Val Thr Gln Ala Val Glu Tyr Asn
 145 150 155 160

Leu Lys Arg Thr Pro Arg Arg Val Lys Ala Thr Ile Val Ala Val Trp
 165 170 175

Leu Ile Ser Ala Val Ile Ser Phe Pro Pro Leu Val Ser Leu Tyr Arg
 180 185 190

Gln Pro Asp Gly Ala Ala Tyr Pro Gln Cys Gly Leu Asn Asp Glu Thr
 195 200 205

Trp Tyr Ile Leu Ser Ser Cys Ile Gly Ser Phe Phe Ala Pro Cys Leu
 210 215 220

Ile Met Gly Leu Val Tyr Ala Arg Ile Tyr Arg Val Ala Lys Leu Arg
 225 230 235 240

Thr Arg Thr Leu Ser Glu Lys Arg Ala Pro Val Gly Pro Asp Gly Ala
 245 250 255
 Ser Pro Thr Thr Glu Asn Gly Leu Gly Ala Ala Ala Gly Ala Gly Glu
 260 265 270
 Asn Gly His Cys Ala Pro Pro Pro Ala Asp Val Gly Pro Asp Glu Ser
 275 280 285
 Ser Ala Ala Ala Glu Arg Arg Arg Arg Arg Gly Ala Leu Arg Arg Gly
 290 295 300
 Gly Arg Arg Arg Ala Gly Ala Glu Gly Gly Ala Gly Gly Ala Asp Gly
 305 310 315 320
 Gln Gly Ala Gly Pro Gly Ala Ala Glu Ser Gly Ala Leu Thr Ala Ser
 325 330 335
 Arg Ser Pro Gly Pro Gly Gly Arg Leu Ser Arg Ala Ser Ser Arg Ser
 340 345 350
 Val Glu Phe Phe Leu Ser Arg Arg Arg Ala Arg Ser Ser Val Cys
 355 360 365
 Arg Arg Lys Val Ala Gln Ala Arg Glu Lys Arg Phe Thr Phe Val Leu
 370 375 380
 Ala Val Val Met Gly Val Phe Val Leu Cys Trp Phe Pro Phe Phe Phe
 385 390 395 400
 Ser Tyr Ser Leu Tyr Gly Ile Cys Arg Glu Ala Cys Gln Val Pro Gly
 405 410 415
 Pro Leu Phe Lys Phe Phe Phe Trp Ile Gly Tyr Cys Asn Ser Ser Leu
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 35 40 45
 Gly Ala Val Ala Gly Leu Ala Ala Val Val Gly Phe Leu Ile Val Phe
 50 55 60
 Thr Val Val Gly Asn Val Leu Val Val Ile Ala Val Leu Thr Ser Arg
 65 70 75 80
 Ala Leu Arg Ala Pro Gln Asn Leu Phe Leu Val Ser Leu Ala Ser Ala
 85 90 95
 Asp Ile Leu Val Ala Thr Leu Val Met Pro Phe Ser Leu Ala Asn Glu
 100 105 110
 Leu Met Ala Tyr Trp Tyr Phe Gly Gln Val Trp Cys Gly Val Tyr Leu
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 Ala Leu Asp Val Leu Phe Cys Thr Ser Ser Ile Val His Leu Cys Ala
 130 135 140
 Ile Ser Leu Asp Arg Tyr Trp Ser Val Thr Gln Ala Val Glu Tyr Asn
 145 150 155 160
 Leu Lys Arg Thr Pro Arg Arg Val Lys Ala Thr Ile Val Ala Val Trp
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 Leu Ile Ser Ala Val Ile Ser Phe Pro Pro Leu Val Ser Leu Tyr Arg
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 Gln Pro Asp Gly Ala Ala Tyr Pro Gln Cys Gly Leu Asn Asp Glu Thr
 195 200 205
 Trp Tyr Ile Leu Ser Ser Cys Ile Gly Ser Phe Phe Ala Pro Cys Leu
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 Ile Met Gly Leu Val Tyr Ala Arg Ile Tyr Arg Val Ala Lys Leu Arg
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 Thr Arg Thr Leu Ser Glu Lys Arg Ala Pro Val Gly Pro Asp Gly Ala
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Asn Gly His Cys Ala Pro Pro Pro Ala Asp Val Glu Pro Asp Glu Ser
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Gly Arg Arg Arg Ala Gly Ala Glu Gly Gly Ala Gly Gly Ala Asp Gly
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Gln Gly Ala Ala Glu Ser Gly Ala Leu Thr Ala Ser Arg Ser Pro Gly
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Pro Gly Gly Arg Leu Ser Arg Ala Ser Ser Arg Ser Val Glu Phe Phe
340 345 350

Leu Ser Arg Arg Arg Arg Ala Arg Ser Ser Val Cys Arg Arg Lys Val
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Ala Gln Ala Arg Glu Lys Arg Phe Thr Phe Val Leu Ala Val Val Met
370 375 380

Gly Val Phe Val Leu Cys Trp Phe Pro Phe Phe Phe Ser Tyr Ser Leu
385 390 395 400

Tyr Gly Ile Cys Arg Glu Ala Cys Gln Val Pro Gly Pro Leu Phe Lys
405 410 415

Phe Phe Phe Trp Ile Gly Tyr Cys Asn Ser Ser Leu Asn Pro Val Ile
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Tyr Thr Val Phe Asn Gln Asp Phe Arg Arg Ser Phe Lys His Ile Leu
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Ser Ser Ala Ala Pro Leu Pro Asp Gly Ala Ala Thr Ala Ala Arg Leu
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```

```

Leu Val Pro Ala Ser Pro Pro Ala Ser Leu Leu Pro Pro Ala Ser Glu
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```

```

Ser Pro Glu Pro Leu Ser Gln Gln Trp Thr Ala Gly Met Gly Leu Leu
          50           55           60

```

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Met Ala Leu Ile Val Leu Leu Ile Val Ala Gly Asn Val Leu Val Ile

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| Val | Ala | Ile | Ala | Lys ₈₅ | Thr | Pro | Arg | Leu | Gln ₉₀ | Thr | Leu | Thr | Asn | Leu ₉₅ | Phe |
| Ile | Met | Ser | Leu ₁₀₀ | Ala | Ser | Ala | Asp | Leu ₁₀₅ | Val | Met | Gly | Leu | Leu ₁₁₀ | Val | Val |
| Pro | Phe | Gly ₁₁₅ | Ala | Thr | Ile | Val | Val ₁₂₀ | Trp | Gly | Arg | Trp | Glu ₁₂₅ | Tyr | Gly | Ser |
| Phe | Phe | Cys | Glu | Leu | Trp | Thr ₁₃₅ | Ser | Val | Asp | Val | Leu ₁₄₀ | Cys | Val | Thr | Ala |
| Ser ₁₄₅ | Ile | Glu | Thr | Leu | Cys ₁₅₀ | Val | Ile | Ala | Leu | Asp ₁₅₅ | Arg | Tyr | Leu | Ala | Ile ₁₆₀ |
| Thr | Ser | Pro | Phe | Arg ₁₆₅ | Tyr | Gln | Ser | Leu | Leu ₁₇₀ | Thr | Arg | Ala | Arg | Ala ₁₇₅ | Arg |
| Gly | Leu | Val | Cys ₁₈₀ | Thr | Val | Trp | Ala | Ile ₁₈₅ | Ser | Ala | Leu | Val | Ser ₁₉₀ | Phe | Leu |
| Pro | Ile | Leu ₁₉₅ | Met | His | Trp | Trp | Arg ₂₀₀ | Ala | Glu | Ser | Asp | Glu ₂₀₅ | Ala | Arg | Arg |
| Cys | Tyr ₂₁₀ | Asn | Asp | Pro | Lys | Cys ₂₁₅ | Cys | Asp | Phe | Val | Thr ₂₂₀ | Asn | Arg | Ala | Tyr |
| Ala ₂₂₅ | Ile | Ala | Ser | Ser | Val ₂₃₀ | Val | Ser | Phe | Tyr | Val ₂₃₅ | Pro | Leu | Cys | Ile | Met ₂₄₀ |
| Ala | Phe | Val | Tyr | Leu ₂₄₅ | Arg | Val | Phe | Arg | Glu ₂₅₀ | Ala | Gln | Lys | Gln ₂₅₅ | Val | Lys |
| Lys | Ile | Asp | Ser ₂₆₀ | Cys | Glu | Arg | Arg | Phe ₂₆₅ | Leu | Gly | Gly | Pro | Ala ₂₇₀ | Arg | Pro |
| Pro | Ser | Pro ₂₇₅ | Ser | Pro | Ser | Pro | Val ₂₈₀ | Pro | Ala | Pro | Ala | Pro ₂₈₅ | Pro | Pro | Gly |
| Pro | Pro ₂₉₀ | Arg | Pro | Ala | Ala | Ala ₂₉₅ | Ala | Ala | Thr | Ala | Pro ₃₀₀ | Leu | Ala | Asn | Gly |
| Arg ₃₀₅ | Ala | Gly | Lys | Arg | Arg ₃₁₀ | Pro | Ser | Arg | Leu | Val ₃₁₅ | Ala | Leu | Arg | Glu | Gln ₃₂₀ |
| Lys | Ala | Leu | Lys | Thr ₃₂₅ | Leu | Gly | Ile | Ile | Met ₃₃₀ | Gly | Val | Phe | Thr | Leu ₃₃₅ | Cys |
| Trp | Leu | Pro | Phe ₃₄₀ | Phe | Leu | Ala | Asn | Val ₃₄₅ | Val | Lys | Ala | Phe | His ₃₅₀ | Arg | Glu |

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Asn Ser Ala Phe Asn Pro Ile Ile Tyr Cys Arg Ser Pro Asp Phe Arg
 370 375 380

Lys Ala Phe Gln Gly Leu Leu Cys Cys Ala Arg Arg Ala Ala Arg Arg
 385 390 395 400

Arg His Ala Thr His Gly Asp Arg Pro Arg Ala Ser Gly Cys Leu Ala
 405 410 415

Arg Pro Gly Pro Pro Pro Ser Pro Gly Ala Ala Ser Asp Asp Asp Asp
 420 425 430

Asp Asp Val Val Gly Ala Thr Pro Pro Ala Arg Leu Leu Glu Pro Trp
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Ala Gly Cys Asn Gly Gly Ala Ala Ala Asp Ser Asp Ser Ser Leu Asp
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Met Gly Ala Gly Val Leu Val Leu Gly Ala Ser Glu Pro Gly Asn Leu
1          5          10          15

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```

Ser Ser Ala Ala Pro Leu Pro Asp Gly Ala Ala Thr Ala Ala Arg Leu
          20          25          30

```

```

Leu Val Pro Ala Ser Pro Pro Ala Ser Leu Leu Pro Pro Ala Ser Glu
          35          40          45

```

```

Ser Pro Glu Pro Leu Ser Gln Gln Trp Thr Ala Gly Met Gly Leu Leu
          50          55          60

```

```

Met Ala Leu Ile Val Leu Leu Ile Val Ala Gly Asn Val Leu Val Ile
65          70          75          80

```

```

Val Ala Ile Ala Lys Thr Pro Arg Leu Gln Thr Leu Thr Asn Leu Phe
          85          90          95

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```

Ile Met Ser Leu Ala Ser Ala Asp Leu Val Met Gly Leu Leu Val Val
          100          105          110

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Pro Phe Gly Ala Thr Ile Val Val Trp Gly Arg Trp Glu Tyr Gly Ser
          115          120          125

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Phe Phe Cys Glu Leu Trp Thr Ser Val Asp Val Leu Cys Val Thr Ala
          130          135          140

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Ser Ile Glu Thr Leu Cys Val Ile Ala Leu Asp Arg Tyr Leu Ala Ile
          145          150          155          160

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Thr Ser Pro Phe Arg Tyr Gln Ser Leu Leu Thr Arg Ala Arg Ala Arg
          165          170          175

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Gly Leu Val Cys Thr Val Trp Ala Ile Ser Ala Leu Val Ser Phe Leu

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| 180 | | | | | 185 | | | | | 190 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ile | Leu | Met | His | Trp | Trp | Arg | Ala | Glu | Ser | Asp | Glu | Ala | Arg | Arg |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Cys | Tyr | Asn | Asp | Pro | Lys | Cys | Cys | Asp | Phe | Val | Thr | Asn | Arg | Ala | Tyr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ile | Ala | Ser | Ser | Val | Val | Ser | Phe | Tyr | Val | Pro | Leu | Cys | Ile | Met |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Phe | Val | Tyr | Leu | Arg | Val | Phe | Arg | Glu | Ala | Gln | Lys | Gln | Val | Lys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Ile | Asp | Ser | Cys | Glu | Arg | Arg | Phe | Leu | Gly | Gly | Pro | Ala | Arg | Pro |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Pro | Ser | Pro | Ser | Pro | Ser | Pro | Val | Pro | Ala | Pro | Ala | Pro | Pro | Pro | Gly |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Pro | Pro | Arg | Pro | Ala | Ala | Ala | Ala | Ala | Thr | Ala | Pro | Leu | Ala | Asn | Gly |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Arg | Ala | Gly | Lys | Arg | Arg | Pro | Ser | Arg | Leu | Val | Ala | Leu | Arg | Glu | Gln |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Lys | Ala | Leu | Lys | Thr | Leu | Gly | Ile | Ile | Met | Gly | Val | Phe | Thr | Leu | Cys |
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| Trp | Leu | Pro | Phe | Phe | Leu | Ala | Asn | Val | Val | Lys | Ala | Phe | His | Arg | Glu |
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